

4.5 Subbottom Profiler (SBP) and Side-Scan Sonar (SSS) (Arai)

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Kohsaku Arai

DAI-PACK (Deep-sea Acoustic Imaging Package) is offline system and is composed of SBP (Sub bottom profiler) and Sidescan sonar. The system can be attached on ROV such as Hyper Dolphin.

Specification

1. SBP

Depth Ranges	5, 10, 20, 40, 80, 150(m)
Shift Range	0-150(m)
Resolution	6(cm)
Penetration	40(m)
Depth Accuracy	± 0.5%
Data File Output	ODC format
Frequency Output	10KHz
Transmit Output Power	300 Watts (Pulsed)
Input Power	10-30 Volts DC, Nominal power 8 Watts

Table 4.5.1: Specification of Deep- Sea SBP on DAI-PACK.

2. SSS

Transducer Frequency	330KHz of each side
Transducer Beam Width	1.8° X 60°
Range	15, 30, 60,90,120(m)
Interface	RS-232 Serial Interface at 115.2 kbps
Data File Output	SportScan format
Input Power	10-16 VDC at 300 mA max

Table 4.5.2: Specification of Deep- Sea Sidescan sonar on DAI-PACK.

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DAI-PACK component

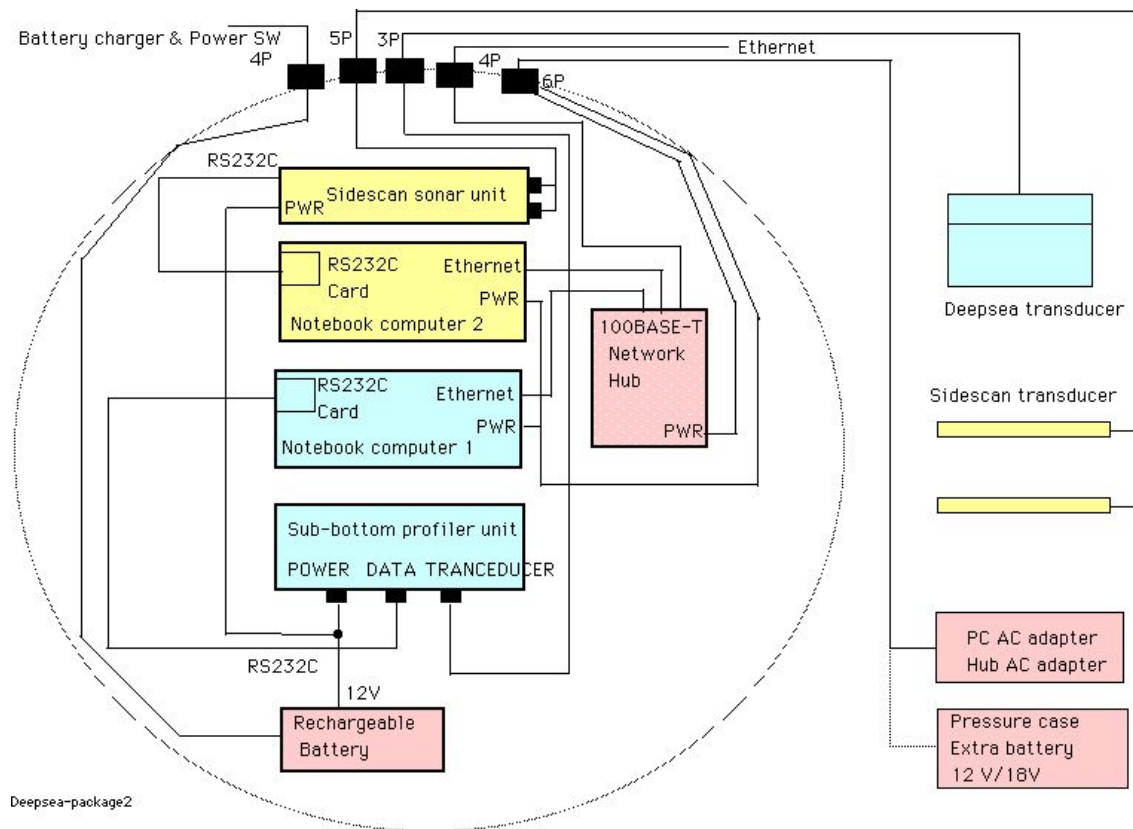


Figure 4.5.1: Main system of DAI-PACK.

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Attach to Hyper Dolphin

Photographs show the DAI-PACK was attached to the Hyper Dolphin during leg 2 of NT05-02 cruise. Transducer of SBP was attached at center of rear side and Transducer of SSS was attached left side of rear ROV.

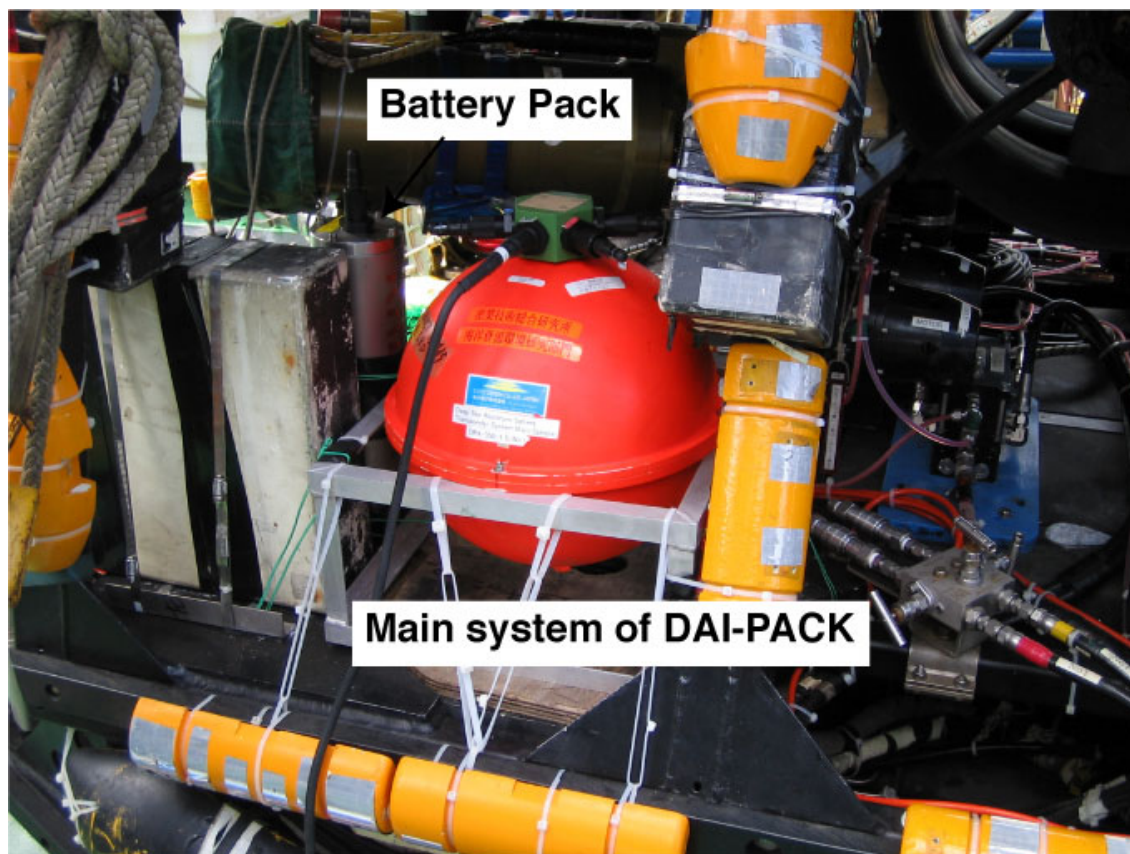


Figure 4.5.2: Main system of DAI-PACK is attached on Hyper Dolphin.

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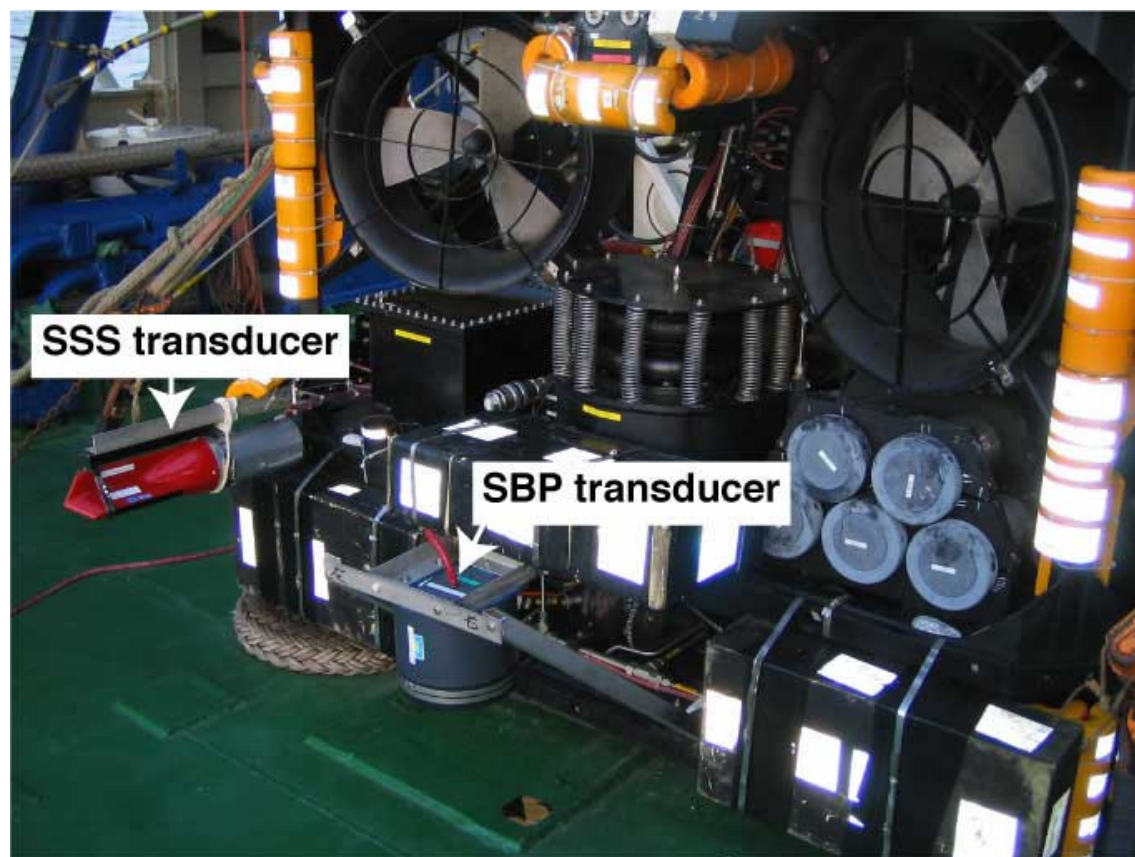


Figure 4.5.3: Transducers of SBP and SSS are attached on rear of Hyper Dolphin